The facts about Santa Barbara

Seventy Six

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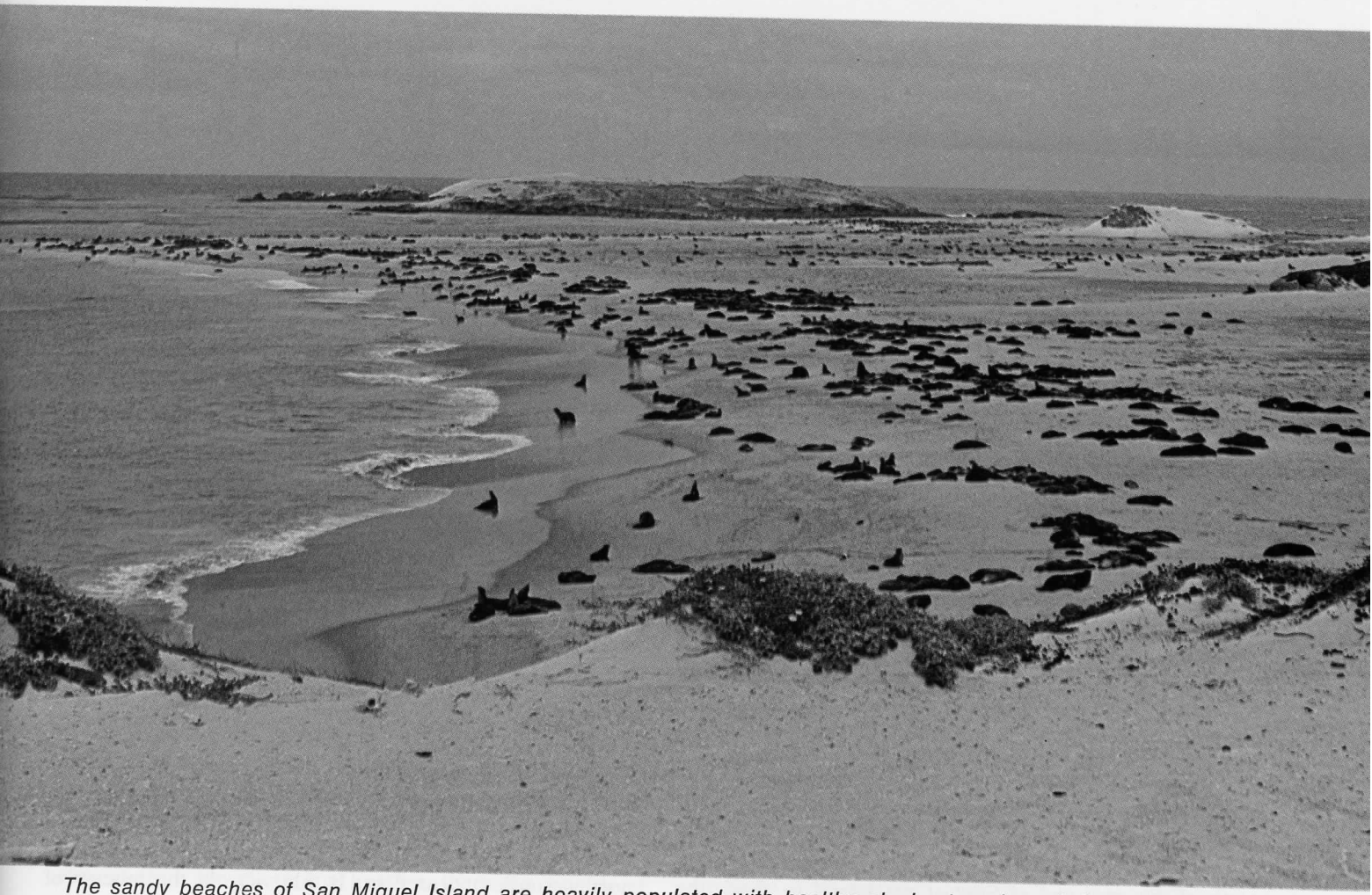

The sandy beaches of San Miguel Island are heavily populated with healthy elephant seals and California sea lions.

A Visit To San Miguel Island

Scientists find Channel Island sea lion colony full of life

SANTA BARBARA

SHORTLY AFTER *Life* magazine published an article which falsely dramatized the plight of oil-soaked seals and sea lions on San Miguel Island, several private, academic and government agencies dispatched qualified observers to the island to make an official investigation of the animals.

The U.S. Interior Department's findings appear on the opposite page. What follows is a report made after a June 10 inspection of the island by Dr. Carleton B. Scott, technical manager of Collier Carbon and Chemical Corporation, a Union Oil subsidiary. Dr. Scott's visiting party included biologist Cecil D. Sterling of Collier and Ken Stracke, a petroleum engineer with Union Oil.

Because San Miguel is a National Monument and closed to casual visitors, the group was guided by National Monument Ranger Vernon Betts. Captain Cliff Matthews of the California Fish and Game Department also accompanied them to lend his experience to the investigation.

Dr. Scott's report follows:

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San Miguel

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California sea lion (Zalophus califnorianus) is brown when dry, black when wet. This is the barking circus "seal."

The elephant seal (Mirounga angustirostris) is well named. The largest of the seals, adult males weigh up to 8,000 pounds. They are polygamous, sleep by day, feed at night on small sharks, squid and rays; they can fast for three months.

We departed Navy Pier in Santa Barbara at 5 a.m. Tuesday, June 10, 1969, aboard the 53-foot vessel *Zelma*. We went first to a point approximately six miles north of the west end of Santa Cruz Island to check the weather and the seas, then directly to the "oil spring" that is charted as being approximately 2.5 miles north (magnetic) from the oiled beach on the west end of San Miguel Island. We attempted to locate gas bubbles or a slick near this oil spring, but were unsuccessful because of the heavy wind chop on the water. (Map, P-22.)

We then went around the west end of San Miguel Island and landed through the surf in a small skiff at approximately 8:30 a.m. The landing site was a small cove immediately east of Adams Cove. Waiting for us on the beach was Dr. Burney LeBoeuf, psychobiologist from the University of California at Santa Cruz. Dr. LeBoeuf works with Dr. Richard S. Peterson and others from U.C.-Santa Cruz studying mammals on San Miguel and elsewhere. Mr. and Mrs. Robert DeLong of this group have been living in temporary quarters on the island on a full-time basis for the past few months. Dr. LeBoeuf alternates with another man from U.C.-Santa Cruz in spending two week periods with the DeLongs.

Dr. LeBoeuf remained with us for the rest of our stay. He guided us directly to the beach where the *Life* photographs were taken. At his request, we remained well hidden from as many animals as possible, taking particular care not to expose ourselves on the skyline as the animals are nervous and tend to stampede easily.

All of the beaches from Point A around Point Bennett back through Point B were heavily populated with elephant seals and California sea lions. Viewed through binoculars, all seemed to be in good health. I could see no animals around Point Bennett that were actually giving birth, but there were many along the windward shore (prevailing northwesterlies) near Point B that were in the process of giving birth or had just very recently given birth. Most of the mothers appeared to take care of their pups immediately after birth, but there were a small minority that seemed to abandon the pups. Dr. LeBoeuf said that the mothers usually slapped the pups shortly after birth until they roused enough to get up and crawl away from the placenta. We found one that had been abandoned, and apparently was dead, but it responded well to a vigorous slapping and shaking by Dr. LeBoeuf.

The windward shore adjacent to Point B had an asphaltic coating on the rocks up to 30-40 feet above the level of the ocean, apparently thrown there by the normal heavy surf. This coating appeared hard and dry, and typical of coatings on the mainland rocks. At the tip of the arrow at Point B there was a section of beach approximately 50 yards long where the oil on the rocks appeared more shiny and fresh than elsewhere. Dr. LeBoeuf said this was the site where *Life* had taken their pictures. We requested and received permission to go down amongst the animals to this shiny area for closer inspection.

The site consists of a small, level sand delta less than three acres in area, and approximately 10-20 feet above the sea. The seaward face of the delta drops down at a 15-30 degree angle over a cobblestone beach to a clear rocky pool. The entire area is heavily strewn with logs and other flotsam. Much of this material is thrown 50-100 yards inland, indicating the violence of the seas that break on this point.

Most of the cobbled beach had aged, dried oil on it that

appeared to have no effect whatsoever on the animals living on that particular section of the beach. In the one 50-yard section, however, the oil appeared fresher, and more easily rubbed off on the fur of the animals. The oil on the rocks was black, but under the rocks it was more yellowish to brown, and had the consistency of stiff jello.

I commented to Messrs. Matthews and Betts that this sticky area looked like a natural seep, but they both assured me that all of the oil came ashore on March 19. In checking with Mr. Donald Robinson, Superintendent of the Channel Island National Monument, on June 12, 1969, I asked if he or any of his staff had ever visited that particular site prior to the blowout to see if there was oil on the beach. He said that no such visits had been made, and he had no way of knowing for sure if these were a natural seep or if the beach had been oiled prior to the blowout.

Mr. Robinson also stated on June 12 that the oil spring north of Point B apparently seeps on a fairly steady basis because, without exception, Mr. Robinson has seen gas bubbles and a slick every time he has been there when the water was still. Apparently the strong surge and average annual wind-induced current of over 14 feet per minute prevents surface observation.

There appears to be a good possibility that at least some of the oil on the northwest shore of San Miguel could have come from the oil spring. We have obtained photographs from Dr. Lowell Redwine of Research Center, taken in 1948, that show a heavy paving of oil on the extreme northwest tip of Santa Rosa Island directly down-wind and down-current from the oil spring. Further, there are records of asphalt deposits on the extreme northwest shore of Santa Cruz Island during the 1800's.

Evidence available at the moment strongly suggests that although some of the dried oil on the rocks at San Miguel may have come from the blowout, the oil spring certainly has oiled these rocks many times in the past, and may well have oiled them at least once since the blowout.

Approximately half a dozen dead pups and half a dozen dead adult animals were seen on the oiled beach at and around Point B. Concentration of dead animals was no higher in the 50-yard long sticky area than in other sections of the beach where the oil was hard and dry on the rocks. We saw many (perhaps 20) oiled pups all playing actively and showing no ill effects. We saw as many dead animals without oil as with oil. Cliff Matthews, Vernon Betts, Dr. LeBoeuf were unanimous in stating that there was absolutely no evidence that the oil was causing any ill effects or abnormal mortality. They were equally firm in their belief that far more damage was being done by people visiting the island and frightening the animals, particularly the very pregnant females who would stampede across the rough terrain and damage their fetuses.

The over-all impression of these animals was one of a normal, happy existence, and there was no feeling that this was "somebody's house where everyone was murdered," as reported by *Life*.

We left San Miguel at approximately 11:45 a.m., and returned via the south side of San Miguel, through the San Miguel Passage, then directly to Santa Barbara. Arrival time was 3:30 p.m.

The over-all impression of these animals was one of a normal, happy existence. The normal animals were threshing around—apparently they were having a very good time.

Turning now to the *Life* article, I would like to comment on some of the specific points made in that article.

One of the photographs shows a close-up of a baby sea lion looking directly into the camera. The caption states that this animal was himself "stained" by the spillage. The fact is that this animal has no oil on him whatsoever. Oiled fur clumps together in a very characteristic pattern, as shown in a later picture where there is an oiled animal lying amongst some oiled rocks. This pup looking directly into the camera has all of his fur standing up in a normal manner and shows no sign of any oil.

The article states that "the odor of the oil would camouflage his own distinctive scent so that his mother would consider him not her own and refuse to nurse him." Dr. LeBoeuf says this is not true, and it is a particularly foolish statement since all of the animals live together on the oiled beach. If the pup has oil on himself, the mother will have oil on herself as well.

Also on page 24 the article states "in a thick fog we passed some miles north of Platform A, through slippery swells which by flashlight looked oily, felt oily to the touch, and gave up a strong scent of high grade crude." During the more than 100 miles that we traveled on the 10th, the only oil on the water was seen in the form of drawn-out iridescent patches approximately three miles directly downwind (east) of Coal Oil Point. Further, the United States Coast Pilot 7, published by U.S. Department of Commerce and Geodetic Survey states, on page 104 of the 9th Edition (1963) that "Coal Oil Point, 1.8 miles westward of Goleta Point is low and may be distinguished by the strong odor of petroleum

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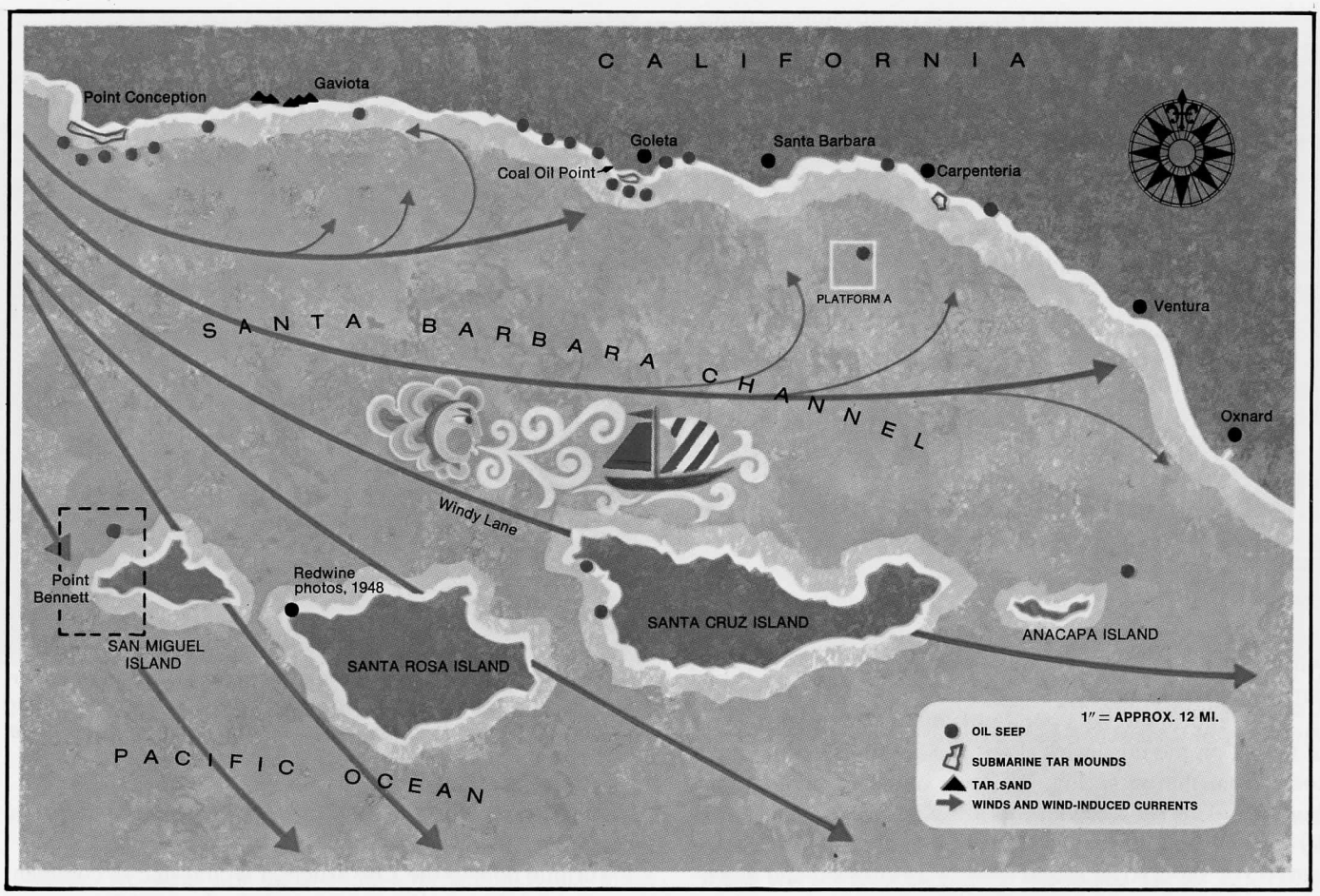

San Miguel

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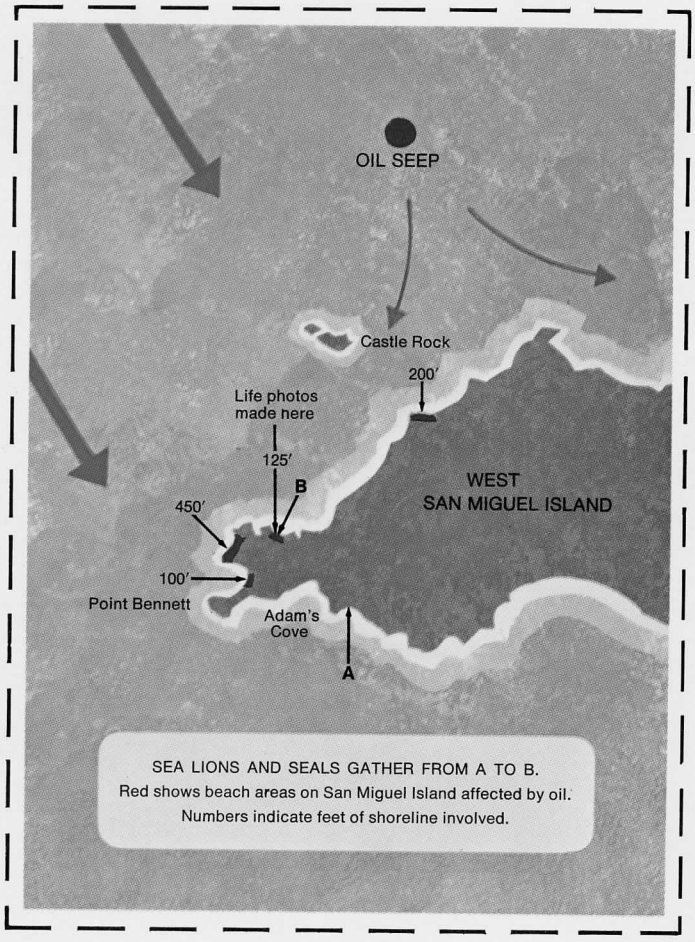
discharged by a spring. This odor is noticeable over two miles offshore."

In the same paragraph *Life* states "but now the churning of our passage was dark in a sea gone dead." (Ed. note: Phosphorescent plankton is a seasonal phenomenon.) As stated above, Cliff Matthews said that plankton tows by CDF&G show there are still plankton in the Channel. Further, during our cruise the vessel stirred up many clouds of birds that were working on the anchovies and other small fish near the surface. These fish would not be there if they did not have a food supply. We saw many jellyfish, seals, sea lions and large fish during our cruise.

Life also states "at water's edge on the channel beaches the blight of oil extended in both directions as far as the eye could see, a slippery, stifling belt of tarrey blackness the width of a tidal ebb. Scattered through the mess were the living and dead creatures whose bright habitat this once had been. Until we became weary and sick of the tally, we counted over a hundred dead sea lions and elephant seals in the immediate area." The fact is that essentially all of the oil on the rocks was hard, like asphalt, and only in this one 50-yard long section did the oil have any shine to it. Even there the oil was not slippery. There was no odor of oil, nor were there any pools of oil into which the animals could fall. The photograph showing an elephant seal immersed in a "pool of sludge" appears to be a hoax. The animal's fur shows no indications of clumping caused by oil, it only shows a normal darkness caused by water. Because of the prevailing northwesterlies, any fresh oil, or pools of oil, at the time of the *Life* visit could only have come from the oil spring.

It is difficult to see how *Life* could have counted over a hundred dead sea lions and elephant seals in the immediate area. No one has been there to clean up the dead animals – as evidenced by some of the carcasses which were extremely old – and our group was able to count less than a dozen dead animals, many of which had no oil on them at all.

Also on page 26 the article states "oil-drenched pups that cried weakly and thrashed about like scalded rats, with their eyelids gummed shut, umbilicals stained and caked . . ." All of the sick animals were quite still; all of the normal animals were indeed thrashing about, apparently having a good time. We saw no animals with enough oil on them to have their eyelids gummed shut. The oil was so viscous that, at most, all it could do was collect on the fur. All freshly born pups had their umbilicals stained and caked; those in the oiled areas had theirs caked with oil, those outside the oiled



areas had theirs caked with dirt.

In the following paragraph the article suggests that some pups died from pneumonia caused by "oil-suffused lungs." This is obviously impossible because, as mentioned above, there were no pools of oil into which an animal could stick its nose. All of the oil was on the surface of the dirt or on the cobblestones. All tide pools were completely clear of oil because of the heavy pounding of the surf.

The article then states, "the disappearance of fish and other marine life from the surrounding waters could take its toll . . ." This is a foolish statement in view of the heavy population of fat, well-fed animals on the beach, and the large number of other animals out in the water catching fish. Further evidence was seen in the form of many fat, well-groomed seagulls, also living in the immediate area. San Miguel Island projects far out into the prevailing northwesterlies (see map), and the wind-driven and Humboldt currents provide the island with a continuous supply of clean water. Since oil travels over the surface of water at about 3.4 per cent of the velocity of the wind, it is obviously impossible for the island waters to receive more than a brief exposure to surface oil. Further, natural oil has been a part of the normal environment for millenia.

In summary, the channel is beautiful, full of life, and considerably less polluted than our local shores along Southern California. (76)

OIL SEEPS
HISTORICAL BACKGROUND

By Dennis R. Wiley
Geologist, Union Oil Company

Oil seeps have long been noted in the Santa Barbara Channel area. An early Franciscan, Father Pedro Font, while near Goleta, Santa Barbara County, in 1776 wrote ". . . much tar which the sea throws up is found on the shores. Little balls of fresh tar are also found. Perhaps there are springs of it which flow out of the sea."

In 1792 George Vancouver, the famed English navigator, noted the presence of a thick slimy material in the Santa Barbara Channel, with a strong smell of tar. Geologists W. P. Blake in 1855 and J. D. Whitney in 1865 both describe the occurrences of tarry materials in the vicinity of Carpinteria. Whitney writes, "The slates (shales) are black and highly bituminous where the outcrop strikes the sea three miles to the southeast of Carpinteria, and large quantities of tarry asphaltum flow from them. For a mile or more along the shore the banks abound in it, and it saturates the beach sand and flows down into the sea." Whitney also describes asphaltic deposits west of Santa Barbara. "The asphaltum, or hardened bituminous matter, occurs in the greatest abundance on the shore at Hill's ranch, about six miles west of Santa Barbara, and lies along the beach for a distance of a mile, in large masses." From papers found on Santa Cruz Island, dated 1893 and written in French, the following is mentioned: "We are able first thing this day to put aboard the schooner leaving from Forney's Cove a little quantity of asphalt accumulation on the shore or that which one could take from the sea." (76)

OIL IN 1948: During field trip in February, 1948, geologist Lowell Redwine, now a Union Oil research associate, photographed geologist Robert E. Anderson inspecting oil on Santa Rosa Island. San Miguel is in background.